

# Thang Cao

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## Education

### Carleton University

Bachelor of Computer Science

CGPA: 11.59/12 (A+). On Dean's Honour List since 2019.

Ottawa, Ontario, Canada

Sep 2019 – Dec 2023 (Expected)

## Experience

### Amazon - Software Engineer Intern

May 2023 – Aug 2023

- Designed the architecture of an Amazon product detail page preview for complex apparel size attribute on the Amazon Seller Central's 1-on-1 item creation experience.
- Implemented the preview feature using React-Redux with TypeScript for front-end and Java for back-end.
- Minimized incorrect input issues during product listing and reduced Amazon Retail's total listing feature friction by 3% within 2.5 millions third-party sellers.

### Pattern - Software Engineer Intern

May 2022 – Aug 2022

- Developed scalable API services using Express.js + TypeScript + Docker integrated with AWS for data syncing which automates workforce recruitment and management processes (previously manual) by 90%
- Applying new design to the Flutter mobile app by creating an internal UI library with reusable widgets
- Set up automated database migration system on CI/CD pipeline with Docker and Terraform

### Kinaxis - Software Engineer Intern Kinaxis

Sep 2021 – Dec 2021

- Designed and built an interactive data visualization with D3.js library on React + TypeScript environment which enhanced the ability to analyze supply chain allotment data and debug issues, assisted onboard Kinaxis's new developers by providing supply arrangement algorithm's insights


### Kinaxis - Software Engineer Intern

May 2021 – Aug 2021

- Investigated and implemented in C++ a product cycle detection graph algorithm that combines variances of strongly connected components and cycles enumeration algorithms to enhanced supply planning outputs for over 200 global enterprises
- Improved the running time of the platform in cycles detection from more than 12 hours to 1 second on a customer data set, produced high-quality and more detailed cycle data compared to the previous version

### CU Blueprint - Volunteer Front-end Developer

Sep 2020 – Aug 2021

Beneficent CRM 

- Developed in a volunteer team a CRM full-stack web application using MERN stack
- Improved the manual processing time of a non-profit organization's loaning services by 10 times
- Collaborated with developers and designers in an Agile team, building a user-friendly and responsive user interface with reusable components using React + TypeScript and CSS that communicates with Node.js server

### Carleton University - Undergraduate Research

May 2020 – Aug 2020

Closest-pair Doubling 

- Explored a divide-and-conquer algorithm that calculates the closest-pair distance of points on multi-dimensional spaces without knowing coordinates using the doubling dimension definition
- Implemented from scratch with C++, analyzed and proved the algorithm's logarithmic running time in practice by analyzing the output data and successfully led the original research project to a conclusion

### Carleton University - Teaching Assistant

Sep 2020 – Present

- Participated in engaging tutorial sections to help professors guide more than 2000 students through materials of Computer Science courses, graded and provided detailed feedback for students' assignments and tests
- Holding weekly office hours to answer questions and help students improve their understanding of the materials

## Skills

**Languages:** Python, JavaScript, TypeScript, C/C++, Java, HTML, SQL, Kotlin

**Technologies:** React, Node.js, React Native, Express.js, Flask, CSS, Git, Linux, Spring, Flutter, AWS